

INTERNATIONAL SEARCH REPORT

PCT/GB2004/004835

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7	F24H1/00	F02G1/043	F02G5/00	H02J3/38	G05D23/19
	F24D19/10	F23N5/10			

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F24H F02G H02J G05D F24D F23N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/084023 A (MICROGEN ENERGY LIMITED; ALDRIDGE, WAYNE, KENNETH; CLARK, DAVID, ANTHO) 9 October 2003 (2003-10-09) cited in the application the whole document	1-16, 18-33, 40
Y	-----	17-39, 41
A	DE 101 11 072 A1 (ROBERT BOSCH GMBH) 2 October 2002 (2002-10-02) abstract; figures 1,2	1-16, 18-33
A	WO 01/61820 A (POWERLINE GES PTY LTD; CHAMBERS, COLIN, JAMES; COLIN, RICHARD, ERNEST) 23 August 2001 (2001-08-23) abstract	15
	-----	-----
	-----	-/-



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

25 May 2005

Date of mailing of the international search report

28.06.2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

García Moncayo, O

INTERNATIONAL SEARCH REPORT

PCT/GB2004/004835

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
A	SWEET W: "Networking assets distributed generation" IEEE SPECTRUM, IEEE INC. NEW YORK, US, vol. 38, no. 1, January 2001 (2001-01), pages 84-86,88, XP002245189 ISSN: 0018-9235 the whole document -----	15	
Y	FR 2 755 262 A (GAZ DE FRANCE) 30 April 1998 (1998-04-30) abstract; figures 1,3 -----	17-33,41	
A	CH 682 345 A5 (VAILLANT GMBH) 31 August 1993 (1993-08-31) abstract -----	17-33,41	
A	DE 37 03 000 A1 (SIEMENS AG; SIEMENS AG, 80333 MUENCHEN, DE) 11 August 1988 (1988-08-11) abstract; figures 1,2 -----	17-33,41	
A	FR 2 369 513 A (DUMONT JEAN) 26 May 1978 (1978-05-26) paragraph '0001!; figure 1 -----	17-33,41	
A	US 4 620 668 A (ADAMS ET AL) 4 November 1986 (1986-11-04) abstract; figures 1-3 -----	17-33,41	
A	US 5 555 927 A (SHAH ET AL) 17 September 1996 (1996-09-17) abstract -----	17-33,41	
A	EP 0 444 308 A (BUDERUS HEIZTECHNIK GMBH) 4 September 1991 (1991-09-04) abstract -----	17-33,41	
Y	US 3 545 676 A (GEORGE E. BARKER) 8 December 1970 (1970-12-08) columns 1,2 -----	34,35	
Y	US 6 536 207 B1 (KAMEN DEAN L ET AL) 25 March 2003 (2003-03-25) column 3, line 8 - line 17; figures 1,2 -----	36-39	
A	US 5 248 083 A (ADAMS ET AL) 28 September 1993 (1993-09-28) abstract; figure 1 -----	36	
A	US 4 231 222 A (FENTON ET AL) 4 November 1980 (1980-11-04) abstract -----	36	
20	P,X	US 2004/083732 A1 (HANNA WILLIAM THOMPSON ET AL) 6 May 2004 (2004-05-06) paragraph '0039!; figure 1 -----	34,35

INTERNATIONAL SEARCH REPORT

PCT/GB2004/004835

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16, 18-33, 40

Independent claim 1 and its dependent claims 2 to 14 and 18 to 33 relate to a domestic heat and power system comprising an energy scheduler, which receives the operating times of a domestic combined heat and power unit (dchp) and which sets the operation times of the domestic appliances.

Independent claim 15 relates to a domestic heat and power system serving a network comprising a hub controller which receives the operating times of a domestic combined heat and power unit (dchp) and which passes this information to a local energy scheduler. Said local energy scheduler sets the operating times of the domestic appliances.

Independent claim 40 relates to a method for using the domestic heat and power system comprising the step of scheduling operation of the domestic appliance to coincide with the operation time of the dchp unit.

2. claims: 17-33, 41

Independent claim 17 and its dependent claims 18 to 33 relate to a domestic heat and power system comprising a programmer module which receives from the user data input corresponding to time bands having start and end times, a desired temperature for the house during that time band and which generates a corresponding schedule therefrom and a controller which sets the operation times of the dchp units in accordance with the schedule provided by the programmer in such a way that the desired temperature is available at the start time of each time band.

Independent claim 41 relates to a method for using the domestic heat and power system comprising the steps of selecting time bands and temperature and scheduling operation of the dchp unit in such a way that the temperature of the home reaches the selected value at the start time of each time band.

3. claims: 34, 35

Independent claim 34 and its dependent claim 35 relate to a domestic combined heat and power unit comprising a burner and a controller, wherein the controller controls the firing rate of the burner depending on the rate of change of the home temperature.

4. claims: 36-39

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Independent claim 36 and its dependent claims 37 to 39 relate to a domestic combined heat and power unit comprising a burner and a controller, wherein the controller controls the firing rate of the burner in order to maintain a substantially constant temperature of the burner head.

INTERNATIONAL SEARCH REPORT

Information on patent family members

PCT/GB2004/004835

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 03084023	A	09-10-2003	AU EP WO	2003216850 A1 1488491 A1 03084023 A1		13-10-2003 22-12-2004 09-10-2003
DE 10111072	A1	02-10-2002	GB	2376271 A , B		11-12-2002
WO 0161820	A	23-08-2001	WO WO WO AU AU AU	0161840 A1 0161838 A1 0161820 A1 3350601 A 3350701 A 3350801 A		23-08-2001 23-08-2001 23-08-2001 27-08-2001 27-08-2001 27-08-2001
FR 2755262	A	30-04-1998	FR	2755262 A1		30-04-1998
CH 682345	A5	31-08-1993	AT AT DE	399218 B 186490 A 4028501 A1		25-04-1995 15-08-1994 28-03-1991
DE 3703000	A1	11-08-1988	NONE			
FR 2369513	A	26-05-1978	FR	2369513 A1		26-05-1978
US 4620668	A	04-11-1986	EP JP	0202787 A2 61250437 A		26-11-1986 07-11-1986
US 5555927	A	17-09-1996	AU CA DE DE EP ES WO	6154496 A 2217252 A1 69618637 D1 69618637 T2 0830649 A1 2168483 T3 9641246 A1		30-12-1996 19-12-1996 28-02-2002 14-08-2002 25-03-1998 16-06-2002 19-12-1996
EP 0444308	A	04-09-1991	DE DE DE DE AT DE EP	4006494 A1 4009774 A1 4018855 A1 4032650 A1 89910 T 59001566 D1 0444308 A2		05-09-1991 02-10-1991 19-12-1991 16-04-1992 15-06-1993 01-07-1993 04-09-1991
US 3545676	A	08-12-1970	US	3469590 A		30-09-1969
US 6536207	B1	25-03-2003	AU BR CA CN EP JP MX NZ WO US	4193601 A 0108897 A 2400750 A1 1416505 A 1259724 A2 2003525386 T PA02008587 A 520891 A 0165100 A2 2003230440 A1		12-09-2001 24-12-2002 07-09-2001 07-05-2003 27-11-2002 26-08-2003 24-02-2003 30-04-2004 07-09-2001 18-12-2003
US 5248083	A	28-09-1993	CA	2102746 A1		10-05-1994
US 4231222	A	04-11-1980	NONE			

INTERNATIONAL SEARCH REPORT

Information on patent family members

PCT/GB2004/004835

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 2004083732	A1 06-05-2004	US 2003029169 A1		13-02-2003